

APPENDIX F
Customer Comments

Appendix F consists of comments elicited by OCST from payload customers who have used Astrotech's facility to process commercial payloads. These companies were asked to rate Astrotech's overall performance in the areas of process safety, materials storage and handling, risk management and release prevention. This overview is intended to serve as a supplement to this report, providing an additional independent view of Astrotech's performance in protecting public health and safety.

Companies responding were:

- Martin Marietta Space Launch Systems
- Ford Aerospace
- McDonnell Douglas Space System Company
- General Electric Astro Space Division

The responses were favorable regarding Astrotech's facility and safety policy. No major criticisms were received, contractors noted that Astrotech's safety requirements were compatible with their own and those in place at Government facilities.

MARTIN MARIETTA SPACE LAUNCH SYSTEMS

CANAVERAL OPERATIONS

P.O. BOX 321399
COCOA BEACH, FLORIDA 32932-1399
TELEPHONE (407) 853-6391

10 May 1990

Refer to: 90-0-08174/71605-90-056-G

To: U.S. Department of Transportation
400 Seventh Street S.W.
Washington, D.C. 20590

Attn: Mr. Ronald K. Gress

Subj: Astrotech Commercial Payload Processing Facility in Titusville,
Florida

1. In response to your 27 April inquiry concerning Astrotech Commercial Payload Processing Facility in Titusville, Florida, I will be glad to furnish the following information:

- (a) Prior to signing a contract with Astrotech, Martin Marietta performed an in-depth Safety/Environmental study of their facilities, procedures and personnel.

This study encompassed both major and minor disciplines, ranging from Lighting Protection to Toxic Fuel Vapor removal, as well as, Fire Evacuation Plans and SARA Compliance. In all cases, we could not find any major problems with facilities, personnel or procedures.

2. I am unable to comply with your request for specific procedures or hazardous operations plans as they involve customer proprietary information.
 3. I have enclosed a copy of the "Scrubber System Check Lists" at Astrotech Space Operations, Titusville, Florida. This System Check List typifies the general operating thoroughness we have observed at Astrotech.

10 May 1990
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4. The Commercial Titan Operations Manager, Mr. Donald W. Fleming, or a member of his staff will be available to answer any additional questions you might have to complete your review of Astrotech.
5. If you need any further assistance, please contact me at (407) 853-9191.

Very Truly Yours,

MARTIN MARIETTA CORPORATION

D.W. Fleming for
W.E. Fields,
Director
Canaveral Operations
Space Launch Systems

WEF:JCH:kd

FORD AEROSPACE

15 May 1990

Mr. Ronald K. Gress
Team Leader, Astrotech Safety Evaluation
Office of Commercial Space Transportation
400 Seventh Street, S. W.
Washington, D.C. 20590

Dear Mr. Gress:

In response to your letter dated April 24, 1990, I am pleased to submit the following opinions and impressions:

1. The Astrotech staff is very knowledgeable and competent.
2. The facilities are adequate and convenient to use. I consider them better and more modern than those at KSC, but not as good as the French facilities at Centre Spatial Guyana.
3. Their safety requirements are adequate and practical and comparable with our own.
4. The one suggested improvement that I have is to improve the visual observation capability of personnel and equipment during a spacecraft fueling operation.

Your request for specific procedures should be addressed to the Department of Space, Government of India, for the Insat operation. However, our next spacecraft processing at Astrotech will be for the GOES program and those procedures should be available through NASA.

I hope this information is helpful and if I can be of further assistance, my address is:

FORD AEROSPACE
Space Systems Division
3825 Fabian Way, M/S G 85
Palo Alto, CA 94303

Sincerely,


Dale H. Joyce

cc: R. W. Whealan

MCDONNELL DOUGLAS

McDonnell Douglas Space Systems Company

A41-L400-AF/DELTA-L-62
25 June 1990

Subject: SAFETY EVALUATION OF ASTROTECH SPACE OPERATIONS'
TITUSVILLE FACILITY

To: Department of Transportation
Office of Commercial Space Transportation
Attention: R. K. Gress
Team Leader, Astrotech Safety Evaluation
400 Seventh Street, S.W.
Washington, D. C. 20590

Dear Mr. Gress:

McDonnell Douglas has been processing space hardware at Astrotech since late 1984. We prepared ten Payload Assist Modules in the Astrotech facility for the Shuttle Space Transportation System, and, more recently, six payloads for the Delta rocket. Our experiences with Astrotech have been satisfactory and consistent with our own safety program requirements.

The conduct of the MDSSC operations at Astrotech are performed in the manner as when we do similar work in the USAF hazardous processing facilities on the Cape Canaveral Air Force Station. Our company's Safety Operating Procedure, SOP-F14-R2, dated September 1985, is enclosed for your review. Our requirements represent the cumulative knowledge and experience generated over the last thirty years in dealing with hazards associated with the assembly and testing of rocket systems.

If we can be of further assistance to you in evaluating Astrotech's safety programs, please feel free to call me or Don Maclean, (407) 853-5594 or 853-5196, respectively.


L. J. Holloway
Director - Launch Sites
Delta Launch Vehicle Division
MDSSC

Enclosure: as noted

Cape Canaveral Air Force Station, P.O. Box 833, Cape Canaveral, FL 32920-0833



GE Astro Space

E. Stanley Warchaizer

June 18, 1990

Mr. Ronald K. Gress, Team Leader
Astrotech Safety Evaluation
Office of Commercial Space Transportation
U. S. Department of Transportation
400 Seventh Street, S. W.
Washington, DC 20590

Dear Mr. Gress:

In response to your request in your letter of 24 April 1990 regarding your ongoing safety evaluation of the Astrotech commercial payload processing facilities, we are pleased to provide the following inputs. We have interviewed the key lead Astro-Space Division (ASD) individuals who have been involved in the past with Astrotech and have summarized their opinions below.

With request to an overall rating of the safety of the Astrotech facilities, support equipment, and hazardous materials oversight, it is felt that Astrotech's safety requirements were essentially equivalent to the GE's safety policies during the time we processed our SATCOM K1 spacecraft at Astrotech. Today, it is somewhat more difficult to assess their acceptability since GE-ASD has not utilized Astrotech in recent years. It is felt that Astrotech's safety policies and requirements should be as stringent as GE's safety policies, as well as those already in place for current KSC/CCAFS facilities.

Copies of specific procedures, plans, and checklists for hazardous operations will be made available once GE-ASD counsel concurs with their release. These copies will be provided under separate cover.

Should you have additional questions or require further discussion, please contact Mr. George H. Abendroth, Manager, System Safety Engineering at (215) 354-1803.

Very truly yours,

E. Stanley Warchaizer